

Title (en)
PERFLUORONATED CYCLE-CONTAINING TERTIARY AMINES USED AS A BASIS FOR GAS-CONVEYING EMULSIONS AND DEVICE FOR THE PRODUCTION THEREOF

Title (de)
TERTIÄRE AMINE MIT PERFLUORIERTEM RING ALS BASIS FÜR GASTRANSPORTIERENDE EMULSIONEN UND VORRICHTUNG ZU DEREN HERSTELLUNG

Title (fr)
AMINES TERTIAIRES PERFLUOREES CONTENANT DES NOYAUX, UTILISEES COMME EMULSIONS DE TRANSPORT DE GAZ ET PROCEDES DE FABRICATION CORRESPONDANTS

Publication
EP 1354868 A4 20040929 (EN)

Application
EP 00992767 A 20001229

Priority
RU 0000547 W 20001229

Abstract (en)
[origin: EP1354868A1] Tertiary perfluorocycloamines (TPFCAs) of general formula (1) <CHEM> where n = 1 or 2, m = 2 or 3, X is <CHEM> or <CHEM> wherein at n = 2 X is <CHEM> as the basis for gas transport emulsions. <??>TPFCAs comprise a group of compounds which are close in their physicochemical properties to perfluoro-N-(4-methylcyclohexyl)-piperidine, particularly in the critical temperature of dissolution in hexane, and which are used in a mixture, forming a number of compounds with gradually varying characteristics. Owing to this, a greater homogeneity of the fluorocarbon phase is achievable in the emulsions and it becomes possible to enhance the stability of the emulsion particles stabilized by an ethylene oxide-propylene oxide block copolymer, with the absence of toxicity for large animals. A mixture of TPFCAs is prepared by electrochemical fluorination of n-piperidinoheptafluorotoluene in anhydrous hydrogen fluoride. The use of this mixture of TPFCAs instead of individual perfluoro-N-(4-methylcyclohexyl) piperidine simplifies, speeds up the process for preparing perfluorinated organic compounds, makes it cheaper, and provides conditions for broader application of gas transport emulsions based thereon.

IPC 1-7
C07C 211/37; C07D 211/66; A61K 31/13; A61K 31/40; A61K 31/452; A61K 31/445; A61K 9/107; C25B 3/08; A61P 7/00; A61P 7/04; A61P 7/08; A01N 1/02; A61K 9/00; C07D 207/08

IPC 8 full level
C07C 211/37 (2006.01); **A01N 1/02** (2006.01); **A61K 9/00** (2006.01); **A61K 9/107** (2006.01); **A61K 31/13** (2006.01); **A61K 31/40** (2006.01); **A61K 31/445** (2006.01); **A61K 31/452** (2006.01); **A61P 7/00** (2006.01); **A61P 7/04** (2006.01); **A61P 7/08** (2006.01); **A61P 9/08** (2006.01); **A61P 41/00** (2006.01); **A61P 43/00** (2006.01); **C07D 207/08** (2006.01); **C07D 207/10** (2006.01); **C07D 211/38** (2006.01); **C07D 211/66** (2006.01); **C25B 3/28** (2021.01)

CPC (source: EP KR US)
A01N 1/021 (2013.01 - EP US); **A61K 9/0026** (2013.01 - EP US); **A61K 47/18** (2013.01 - KR); **A61P 7/00** (2017.12 - EP); **A61P 7/04** (2017.12 - EP); **A61P 7/08** (2017.12 - EP); **A61P 9/08** (2017.12 - EP); **A61P 41/00** (2017.12 - EP); **A61P 43/00** (2017.12 - EP); **C07C 211/37** (2013.01 - EP US); **C07D 207/08** (2013.01 - EP US); **C25B 3/28** (2021.01 - EP US); **A61K 9/107** (2013.01 - EP US); **C07C 2601/08** (2017.04 - EP US); **C07C 2601/14** (2017.04 - EP US)

Citation (search report)
• [X] US 4534978 A 19850813 - YOKOYAMA KAZUMASA [JP], et al
• [E] WO 0234297 A2 20020502 - VISYS AG [DE], et al
• See references of WO 02053525A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
EP 1354868 A1 20031022; **EP 1354868 A4 20040929**; CA 2433580 A1 20020711; CN 1241901 C 20060215; CN 1489573 A 20040414; JP 2004517119 A 20040610; KR 20030076593 A 20030926; MX PA03005940 A 20040504; RU 2003123103 A 20050220; RU 2263662 C2 20051110; US 2004054184 A1 20040318; US 6878826 B2 20050412; WO 02053525 A1 20020711

DOCDB simple family (application)
EP 00992767 A 20001229; CA 2433580 A 20001229; CN 00820113 A 20001229; JP 2002554644 A 20001229; KR 20037008773 A 20030627; MX PA03005940 A 20001229; RU 0000547 W 20001229; RU 2003123103 A 20001229; US 45176303 A 20031007